REMARKS

Reconsideration of this application as amended is requested. By this amendment Applicant has amended two paragraphs of the specification at pages 3-5 to update the references to cited co-pending applications. Original claims 1-7 remain in the case.

The Examiner rejected claim 1 under 35 U.S.C. 103(a) as being unpatentable over Harris et al ("Harris" – U.S. Patent No. 5,325,318) in view of Applicant's Admitted Prior Art ("AAPA"); rejected claims 2 and 3 under 35 U.S.C. 103(a) as being unpatentable further in view of Levien (U.S. Patent No. 5,337,264); and objected to claims 4-7 as being dependent upon a rejected base claim. Applicant respectfully traverses these rejections by the Examiner.

Applicant's claimed invention is a filter having a variable passband that builds upon his own prior and contemporaneous work as exemplified in U.S. Patent No. 6,976,045 and U.S. Patent Application Serial No. 10/802,305. A filter circuit **10** has as inputs a signal to be filtered, **X(n)** (forward signal), and a reversed version of the signal, **X(N-n)** (reverse signal), and outputs a filtered signal, **Output**, as a function of a variable coefficient **b0'(R, a1'(R** . A variable equivalent sample rate coefficient converter (VESRCC) **50, 60** has an initial coefficient a_1, b_0 as an input together with a variable resampling rate parameter **R** that determines the variable passband. The output from the VESRCC is the variable coefficient. The filter circuit is in the form of a "seagull" architecture having a first IIR filter **20** to which the forward signal is input and having a second IIR filter **30** to which the reverse signal is input to produce first and second filtered signals. The first and second filtered signals are combined **(40)** with the forward signal to produce the filtered signal.

In contradistinction to Applicant's claimed invention Harris discloses a variable rate digital filter **20** that uses a variable rate sample clock **14** with combinations of various digital filter elements to achieve various filter realizations allowing a selectable output bandwidth. The resulting filter is operative at a broad range of sample rates over a predetermined bandwidth range.

The Examiner states with respect to claim 1 that Harris discloses a filter having variable passband which has a forward signal input and a reverse signal input, referencing Fig. 10 as described at column 6, lines 5-10, and having as an output a filtered signal as a function of a variable coefficient, referencing column 6, lines 19-21. Fig. 10 of Harris describes in more detail an equalizer **26** that is inserted between a low-pass filter **24** and high-pass filter **28** (Fig. 8 corresponding to a post-filter **23** that is the last stage in a multi-stage filter configuration -- Fig. 2) which has as inputs the output **IN** from the low-pass filter and an external programmable coefficient A_1 to produce an equalized signal. The input signal is delayed (**214, 204, 216**) and input to an output adder **212**, the output of which is also delayed (**220, 206, 218**) and added (**208**) to the input signal. The output from the input adder **208** is multiplied (**222**) by the programmable coefficient and also input to the output adder. The passage of the input signal through the upper flip-flops is termed a forward signal *path* and the passage of the output from the output adder through the lower flip-flops is termed a reverse signal *path* (Emphasis added). Applicant submits that the signal paths taught by Harris in the equalizer are not equivalent to forward and reverse signals, which one of ordinary skill in the art who has read the specification understands to be the input signal (forward signal) and "a reversed version of the input signal (reverse signal)." (Page 4, line 8) In other words, the claim language does not refer to the direction of signal paths within the filter, but rather to the actual signals that are input to the filter. Therefore Harris neither teaches nor suggests that the filter has "as inputs a signal to be filtered (a forward signal) and a reverse version of the signal to be filtered (a reverse signal)" as is recited by Applicants. Thus claim 1 is deemed to be allowable as being nonobvious to one of ordinary skill in the art over Harris in view of the AAPA (Applicant's VESRCC).

With respect to claim 2 the Examiner states that Levien discloses a first IIR filter having the forward signal and the variable coefficient as inputs and providing as an output a first filtered signal, and a second IIR filter having the reverse signal and the variable coefficient as inputs and providing as an output a second filtered signal, referencing the description of Fig. 5 at column 7, lines 35-42. Levien describes the same input signal being input in parallel to several filters **56, 62, 68**, the outputs of which are scaled together with the input signal and multiplied (**60, 66, 72**) to produce

the output signal. There is no indication in Levien of separate filtering of a forward signal corresponding to the input signal and a reverse signal corresponding to a reversed version of the input signal -- Levien only filters a single input signal. Therefore the combination of Levien with Harris and the AAPA does not teach one of ordinary skill in the art the configuration recited by Applicant in claim 2.

With respect to claim 3 the Examiner states that Harris discloses a summing circuit having as inputs the first and second filtered signals and the forward signal, referencing the adder **212** of Fig. 10. However at best Harris discloses a delayed version of the input signal being added to the output of the reverse signal path, and not two separate filtered signals being added together with the input signal as recited by Applicant. Thus claims 2 and 3 are deemed to be allowable as being nonobvious to one of ordinary skill in the art over Harris in view of the AAPA and Levien.

Claims 2 and 3 further are deemed to be allowable as depending from claim 1, which is deemed to be allowable.

Applicant acknowledges that the Examiner deems claims 4-7 to contain allowable subject matter. However Applicant deems that claims 4-7 are allowable in their present form as depending from claims deemed to be allowable.

In view of the foregoing amendment and remarks allowance of claims 1-7 is urged, and such action and the issuance of this case are requested.

Respectfully submitted,

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